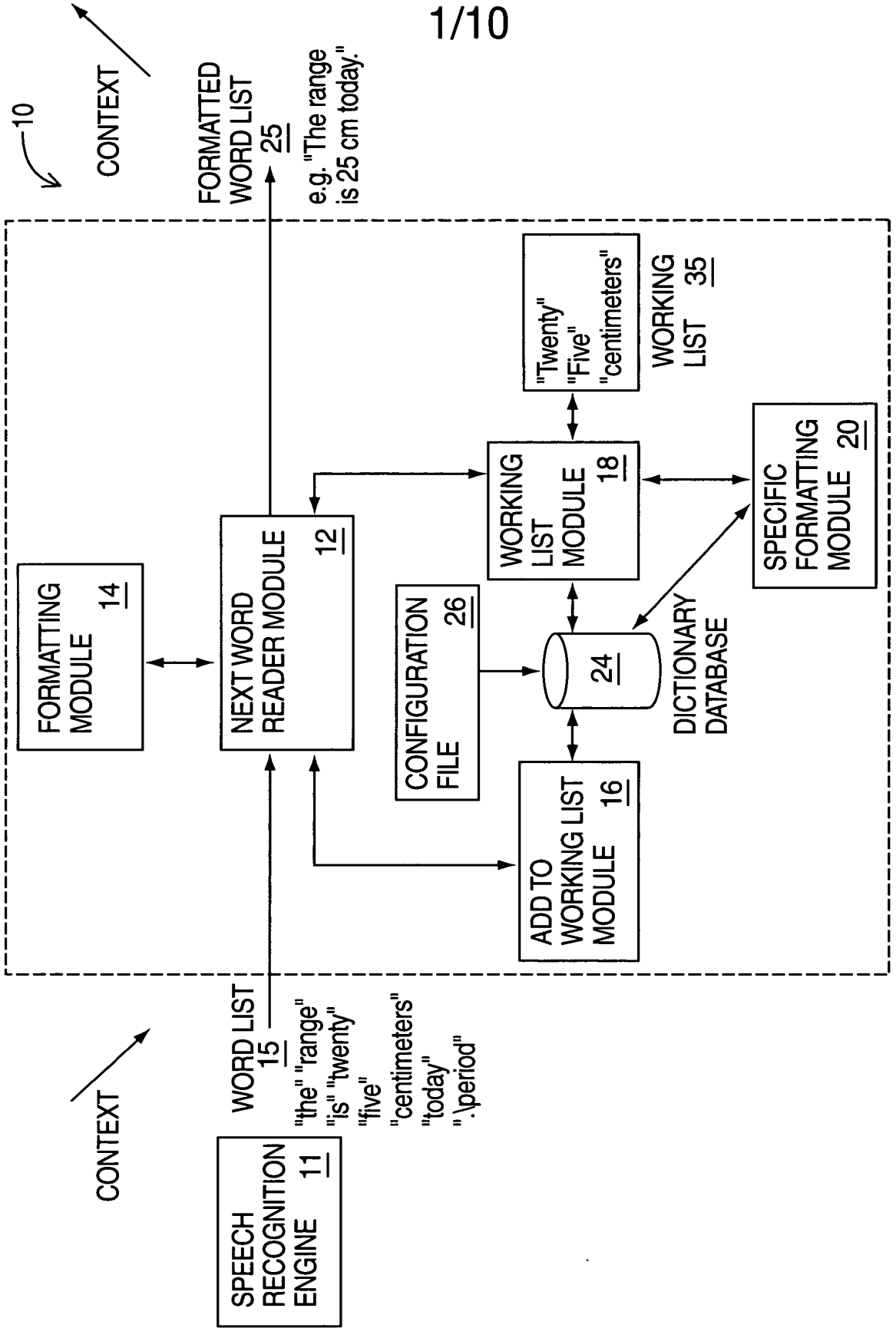

10
CONTEXT
FORMATTED WORD LIST 25
e.g. "The range is 25 cm today."
FORMATTING MODULE 14
NEXT WORD READER MODULE 12
WORKING LIST MODULE 18
"Twenty"
"Five"
"centimeters"
WORKING LIST 35
SPECIFIC FORMATTING MODULE 20
CONFIGURATION FILE 26
24
DICTIONARY DATABASE
ADD TO WORKING LIST MODULE 16
CONTEXT
WORD LIST 15
"the" "range"
"is" "twenty"
"five"
"centimeters"
"today"
".\period"
SPEECH RECOGNITION ENGINE 11

FIG. 1

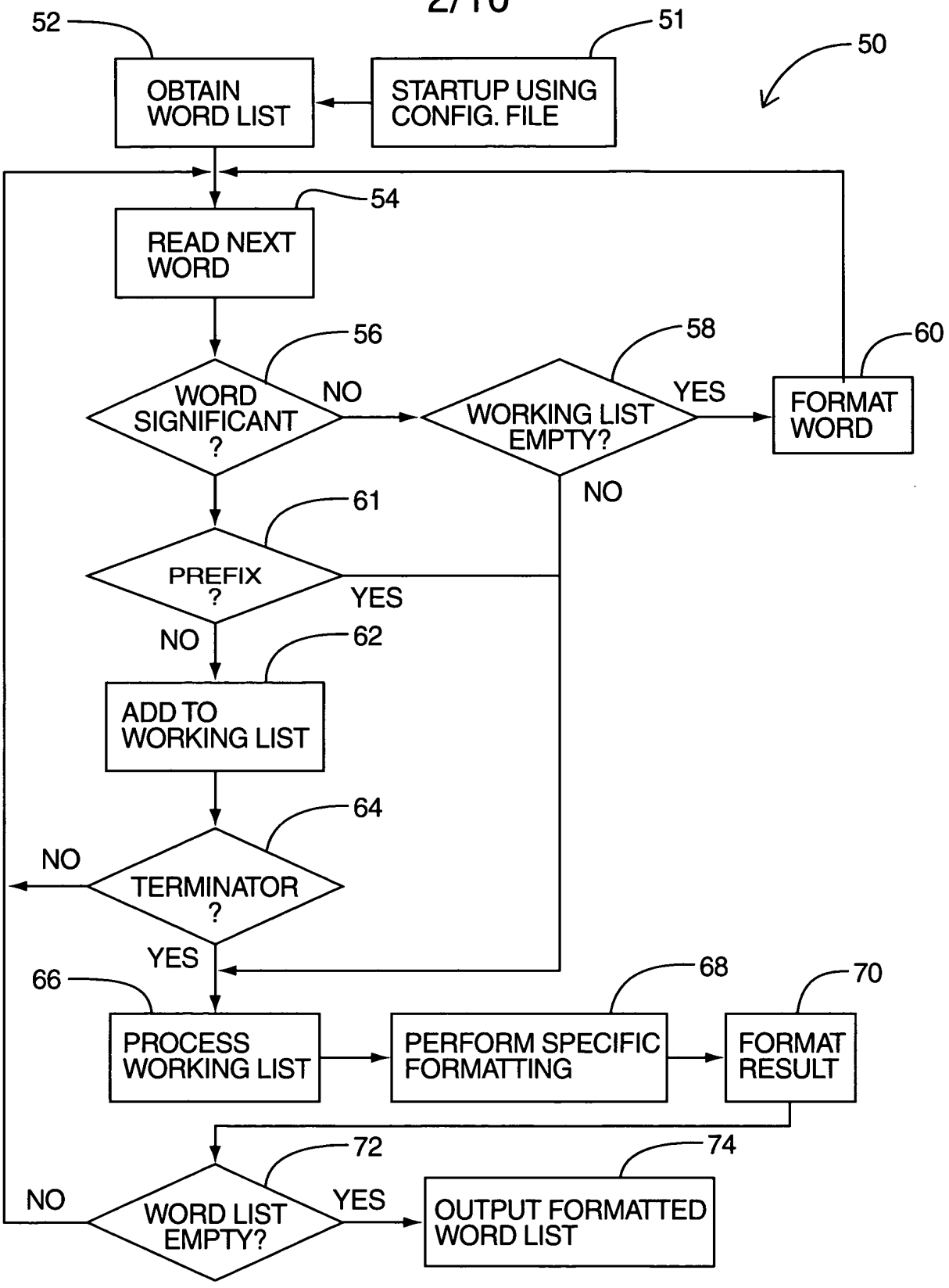
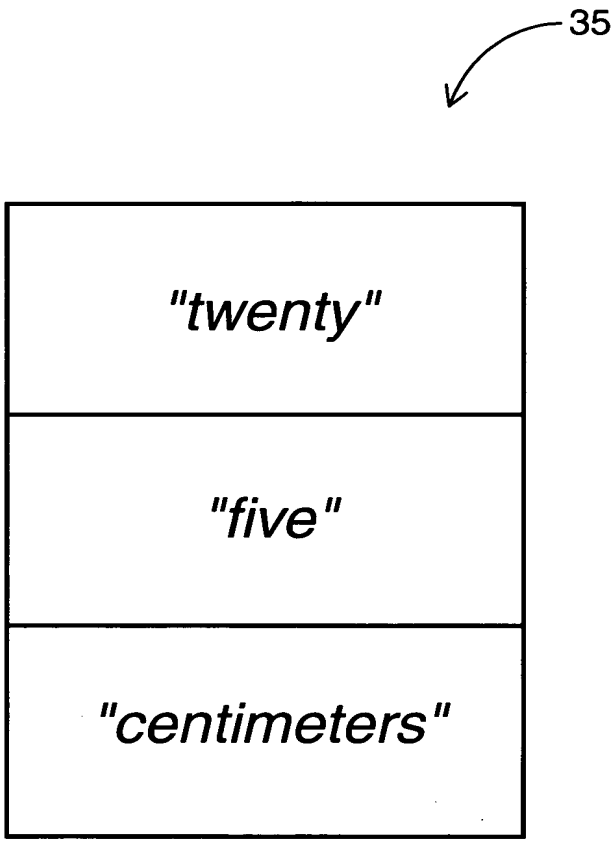

52
OBTAIN WORD LIST
51
STARTUP USING CONFIG. FILE
50
54
READ NEXT WORD
56
WORD SIGNIFICANT ?
NO
58
WORKING LIST EMPTY?
YES
60
FORMAT WORD
NO
61
PREFIX ?
YES
NO
62
ADD TO WORKING LIST
64
NO
TERMINATOR ?
YES
66
PROCESS WORKING LIST
68
PERFORM SPECIFIC FORMATTING
70
FORMAT RESULT
72
NO
WORD LIST EMPTY?
YES
74
OUTPUT FORMATTED WORD LIST

FIG. 2



WORKING LIST 35

FIG. 3

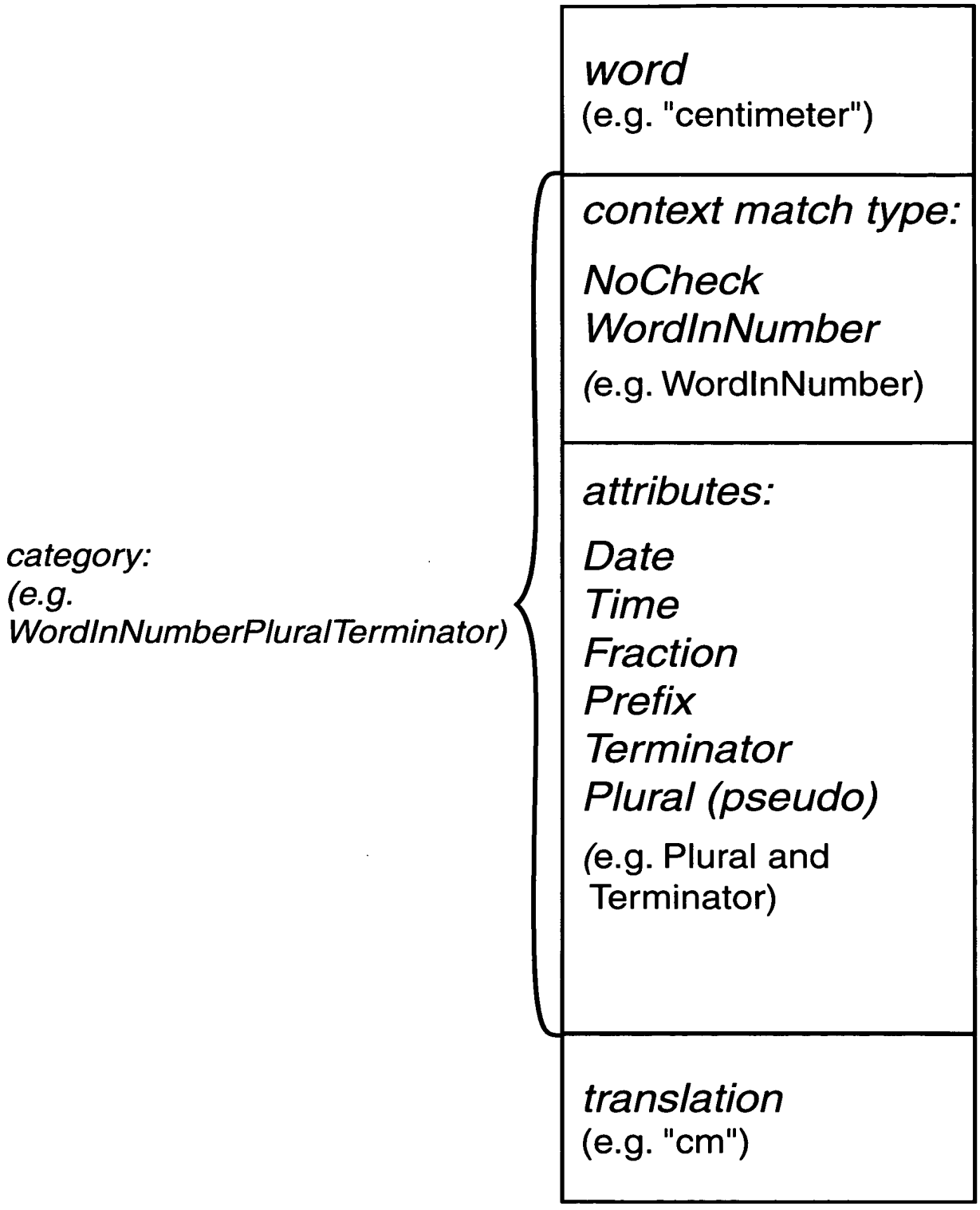

word
(e.g. "centimeter")
context match type:
NoCheck
WordInNumber
(e.g. WordInNumber)
attributes:
Date
Time
Fraction
Prefix
Terminator
Plural (pseudo)
(e.g. Plural and Terminator)
translation
(e.g. "cm")
category:
(e.g.
WordInNumberPluralTerminator)

FIG. 4A

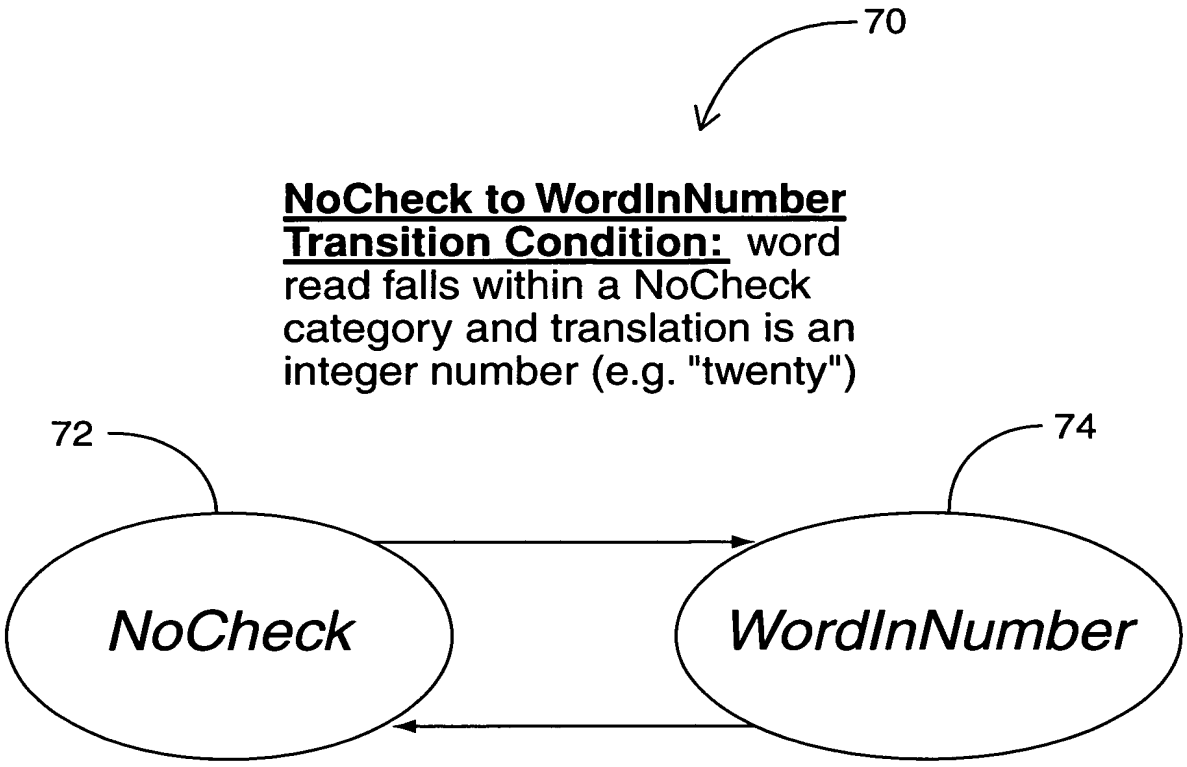

70
NoCheck to WordInNumber Transition Condition: word read falls within a NoCheck category and translation is an integer number (e.g. "twenty")
72
74
NoCheck
WordInNumber
WordInNumber to NoCheckTransition Condition: a non-significant word, a Prefix word, or a Terminator word has been read (e.g. "centimeter")

FIG. 4B

CONFIGURATION FILE 26

[NoCheck]

[NoCheckPlural]

[NoCheckTerminator]

[WordInNumber]

[WordInNumberPlural]

[WordInNumberFraction]

[WordInNumberFractionPluralTerminator]

[WordInNumberFractionTerminator]

[WordInNumberTime]

[NoCheckDate]

[WordInNumberTerminator]

[WordInNumberPlural]

[NoCheckFractionTerminator]

[NoCheckFractionPluralTerminator]

[NoCheckPrefix]

[NoCheckPrefixTerminator]
fahrenheit=S~fahrenheit

[NumberFormatOptions]
AddCommasToNumbers=1
AddSlashesToDates=1
AddHyphensToPhoneNumbers=1
AddColonsToTime=1

FIG. 4C

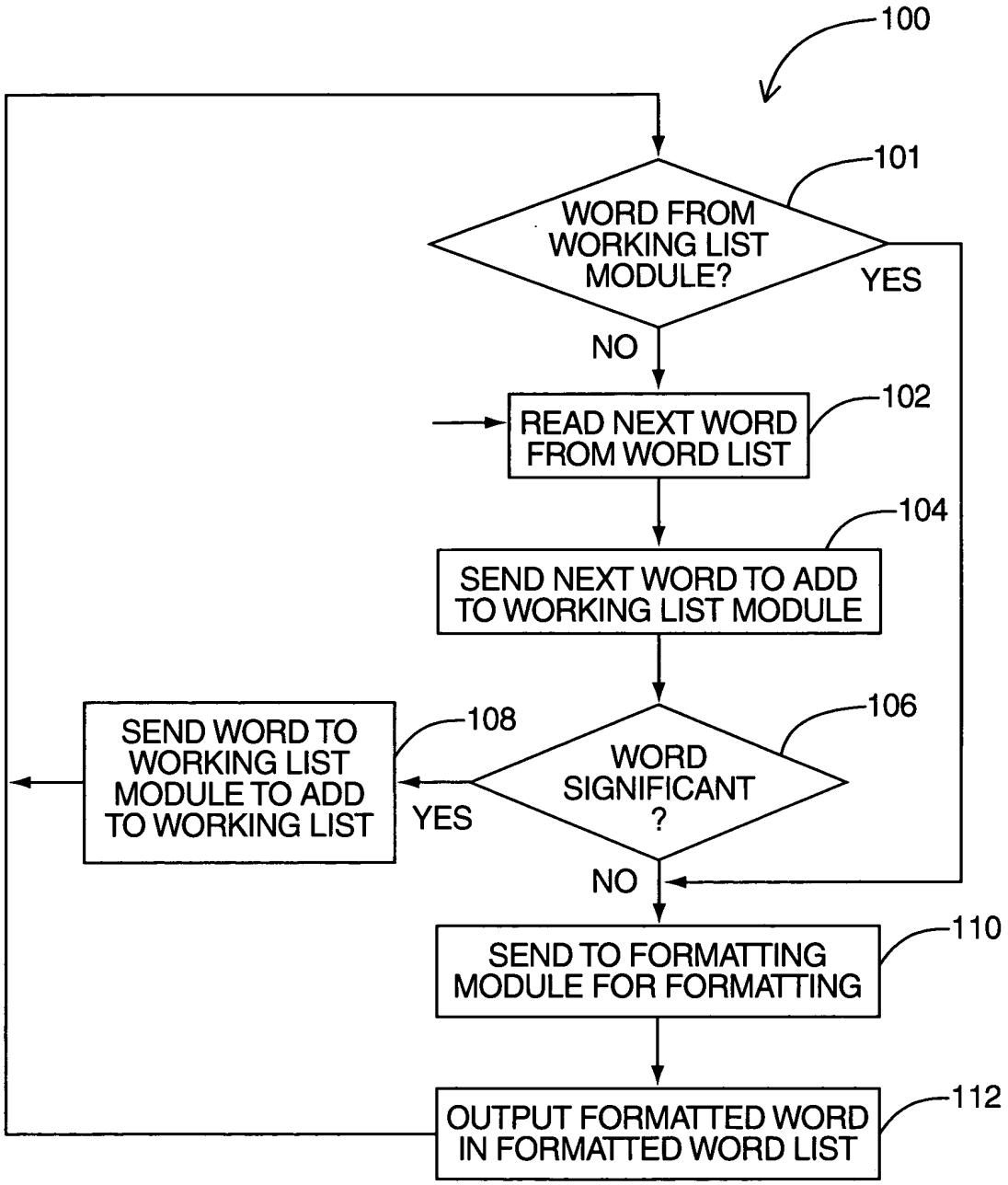

100
101
WORD FROM WORKING LIST MODULE?
YES
NO
102
READ NEXT WORD FROM WORD LIST
104
SEND NEXT WORD TO ADD TO WORKING LIST MODULE
106
WORD SIGNIFICANT ?
108
SEND WORD TO WORKING LIST MODULE TO ADD TO WORKING LIST
YES
NO
110
SEND TO FORMATTING MODULE FOR FORMATTING
112
OUTPUT FORMATTED WORD IN FORMATTED WORD LIST

FIG. 5

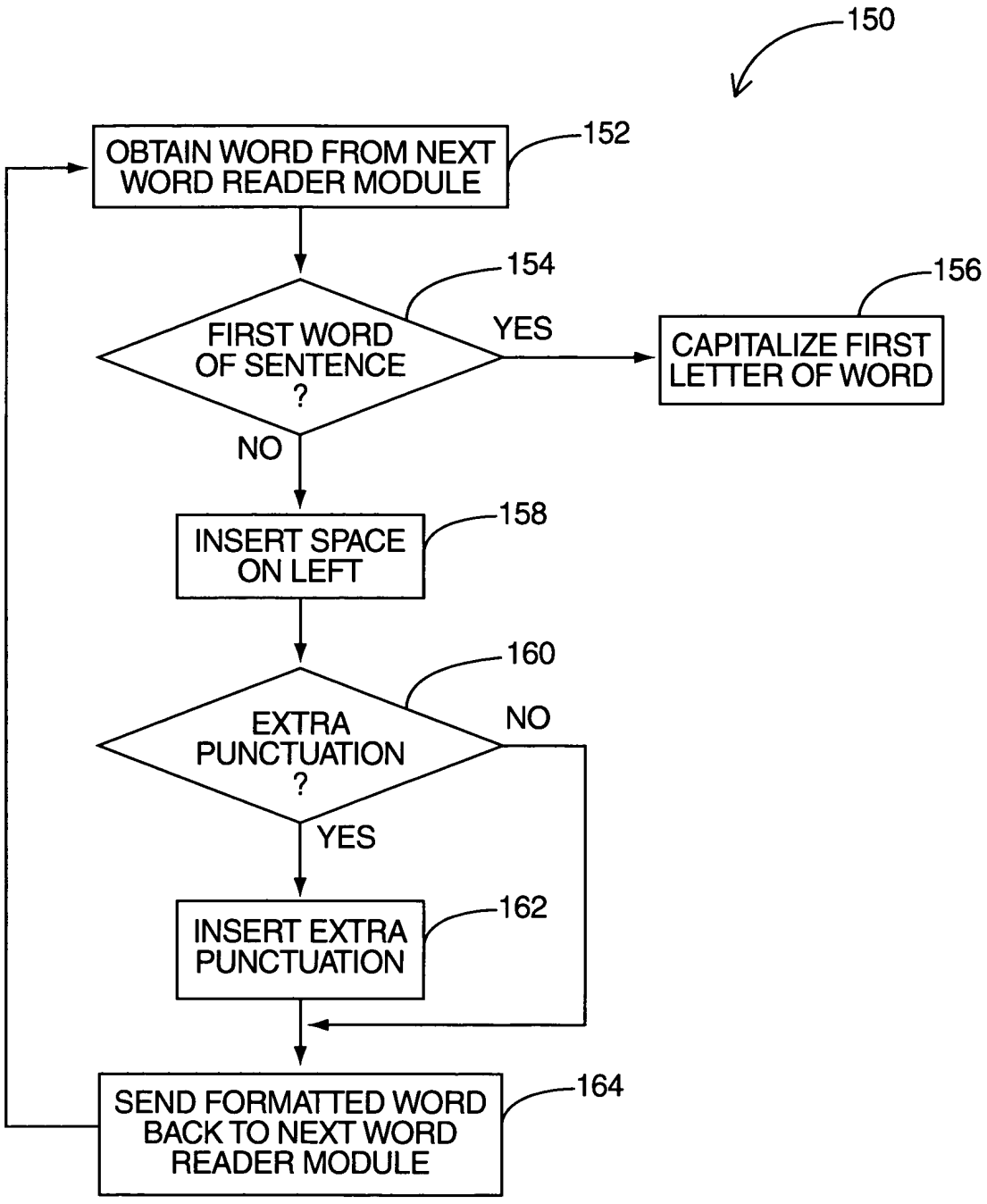

150
OBTAIN WORD FROM NEXT WORD READER MODULE
152
FIRST WORD OF SENTENCE ?
154
YES
CAPITALIZE FIRST LETTER OF WORD
156
NO
INSERT SPACE ON LEFT
158
EXTRA PUNCTUATION ?
160
NO
YES
INSERT EXTRA PUNCTUATION
162
SEND FORMATTED WORD BACK TO NEXT WORD READER MODULE
164

FIG. 6

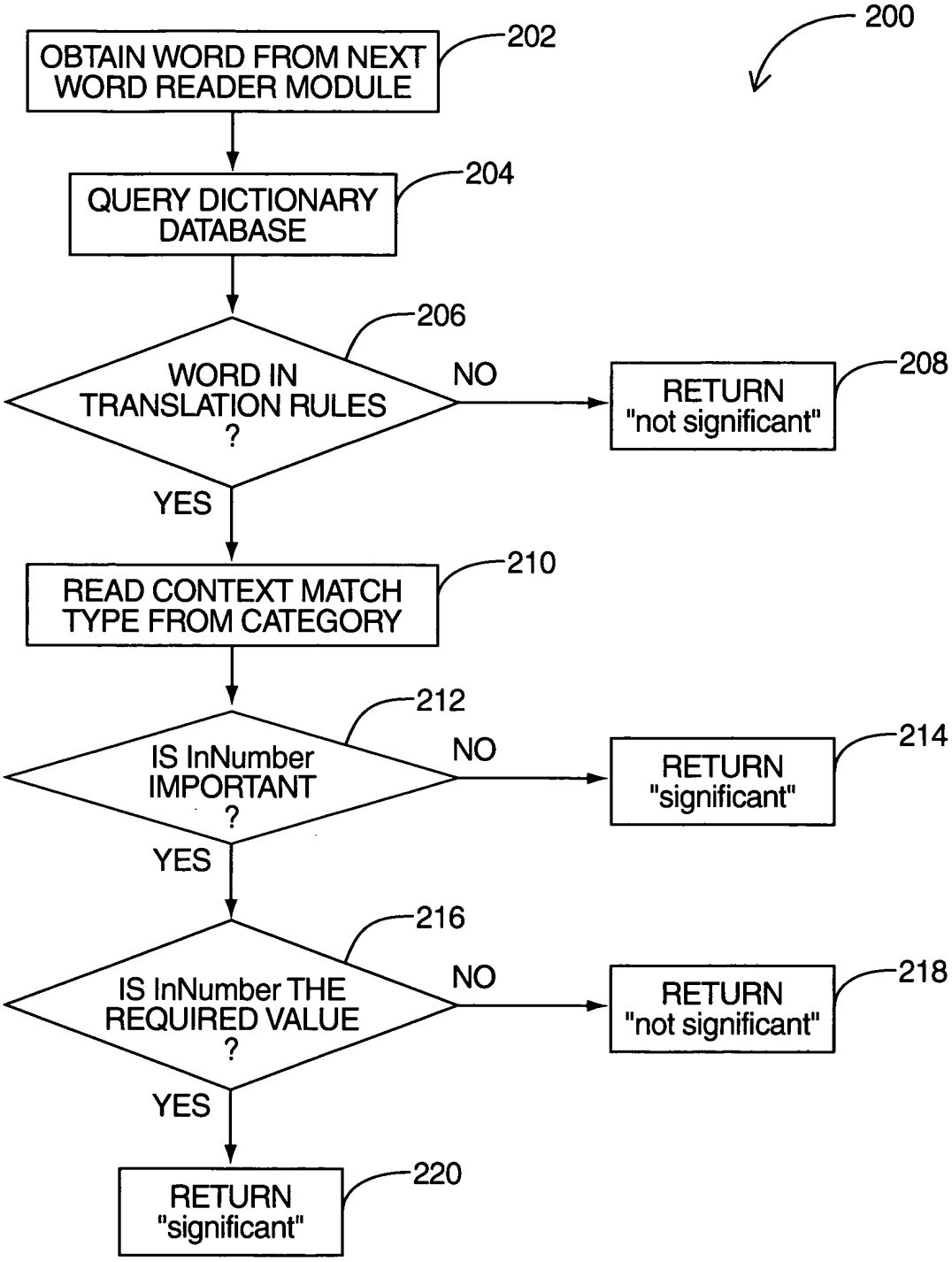

200
OBTAIN WORD FROM NEXT WORD READER MODULE
202
QUERY DICTIONARY DATABASE
204
WORD IN TRANSLATION RULES ?
206
NO
RETURN "not significant"
208
YES
READ CONTEXT MATCH TYPE FROM CATEGORY
210
IS InNumber IMPORTANT ?
212
NO
RETURN "significant"
214
YES
IS InNumber THE REQUIRED VALUE ?
216
NO
RETURN "not significant"
218
YES
RETURN "significant"
220

FIG. 7

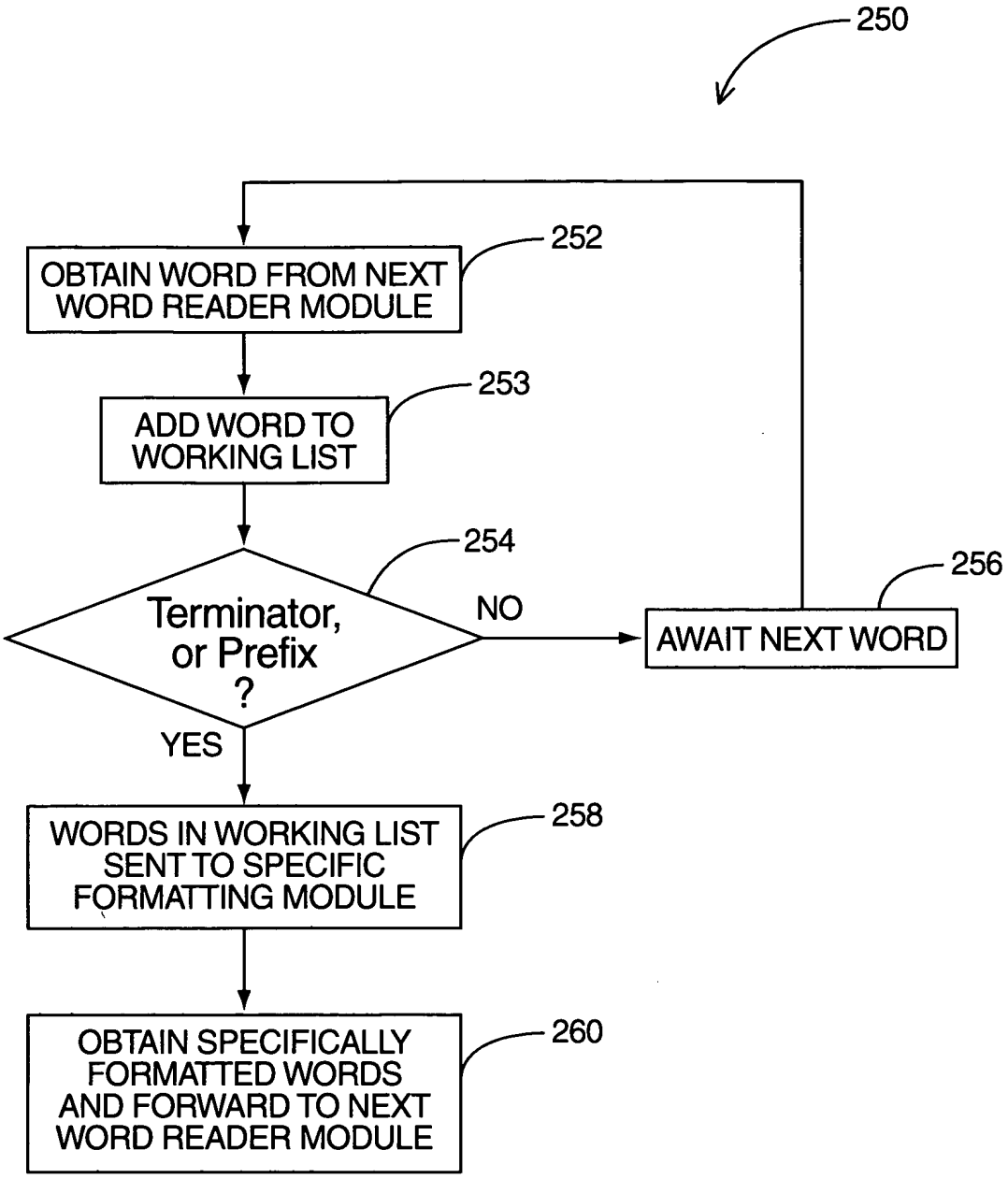

250
OBTAIN WORD FROM NEXT WORD READER MODULE
252
ADD WORD TO WORKING LIST
253
Terminator, or Prefix ?
254
NO
AWAIT NEXT WORD
256
YES
WORDS IN WORKING LIST SENT TO SPECIFIC FORMATTING MODULE
258
OBTAIN SPECIFICALLY FORMATTED WORDS AND FORWARD TO NEXT WORD READER MODULE
260

FIG. 8